CLAIMS

What is claimed is:

1. A method of estimating the size of variable-length code, comprising:

   (a) providing a block of quantized coefficients;

   (b) forming a histogram of magnitudes of non-zero ones of said quantized coefficients;

   (c) estimating a code size for said block of quantized coefficients as a sum of one or more terms where each of said terms is a product of (i) the number of said quantized coefficients in a bin of said histogram and (ii) a code size of a variable length code for an average run of zero-valued ones of said quantized coefficients together with a representative level for said bin.

2. The method of claim 1, wherein:

   (a) said code size of (ii) of step (c) of claim 1 is a normalized code size estimate depending upon a normalized number of non-zero coefficients in said bin.

3. The method of claim 1, further comprising:

   (a) providing a second block of quantized coefficients;

   (b) forming a second histogram of magnitudes of said second block; and

   (c) estimating a second code size for said second block.

4. The method of claim 1, further comprising:

   (a) adjusting the quantization level of said block of quantized coefficients; and

   (b) estimating said code size for said adjusted quantization level.

5. The method of claim 1, wherein:

   (a) said average run of zero-valued ones of said quantized coefficients of (ii) of step (c) of claim 1 is computed from a scaling of said histogram.

6. The method of claim 1, wherein:

(a) said code size of (ii) of step (c) of claim 1 is from a restricted variable-length code table.

7. A method of encoding, comprising:

(a) estimating a code size which would arise from using a table of run and level variable length codewords to encode a block of coefficients which have been quantized with a first set of quantization levels;

(b) quantizing said block of coefficients using the results of step (a) as part of a selection of a set of quantization levels for said block of coefficients; and

(c) encoding said block of quantized coefficients using said table;

(d) wherein said estimating of step (a) includes:

(i) forming a histogram of said block of coefficients when quantized with said first set of quantization levels;

(ii) estimating a code size for said block of quantized coefficients of (i) as a sum of terms where each of said terms is a product of (i) the number of said quantized coefficients in a bin of said histogram and (ii) a code size of a variable length code from said table for an average run of zero-valued ones of said quantized coefficients together with a representative level for said bin.